

DE 851,453

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PROCESS FOR THE PRODUCTION OF A COFFEE EXTRACT

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A hot coffee extract has already been produced, frozen and centrifuged (Patent 41,983). A coffee extract has already been obtained with hot water of below 75°C with the exclusion of air (Patent 69,901). One has also worked above 94°C and added acid and some coffee oil (Patent 144,016). The doubly distilled volatile proportions were also added to the evaporated coffee extract residue (Patent 39,185). The same has been conducted in the presence of sugar (Patent 267,196). The extract was evaporated under reduced pressure (Patent 416,890), used distilled water for its production (Patent 686,689). The roasted coffee powder was also treated with steam and then extracted cold (Patent 291,918). The extract from roasted beans was even dried and reroasted (Patent 295,482). Finally, the roasted coffee was flooded several times with

cold water and the extracted residue was boiled with water to remove the bitter constituents and other substances that cannot be eliminated with cold water, the extract condensed and cooled and then poured into the first cold decanting (Patent 12,053).

All these processes have the shortcoming that they either operate in a very complicated and expensive manner or they dispense with the finer proportions of the aromatic substances of the roasted coffee or the concentration.

It was now found that an excellent coffee extract of the desired concentration is obtained in the simplest and cheapest manner if the ground roasted coffee, optionally in mixture with solid diluents such as washed sea sand or spent coffee powder, is extracted with cold-to-lukewarm water or other solvents in accordance with the present invention. If desired, the extract can be brought to dryness sparingly in a known manner, e.g., by spraying in a drying tower.

It was also found that the processing time can be substantially shortened if the process is conducted under pressure.

It is surprising for the technician that not only the non-heat sensitive aromatic substances but also the heat-sensitive aromatic substances and the desired coloring agents and bitter substances are obtained to a sufficient degree in the extract. Contrary to the expectation that a degree of saturation of the solution that cannot be exceeded soon has to occur for the desired substances, quite surprisingly these substances are actually enriched sharply in the extract according to plan. According to the invention method, extracts can be obtained, e.g., up to a syrupy state, which solidify when standing in air.

#### Embodiment examples

1. A 7-m-long hollow column is filled with a mixture of equal volumetric parts of roasted fine-ground coffee with washed sea sand, water is allowed to enter at the top under the pressure of 1 atm and the quantity and thus the through-flow rate are regulated so that the column is run through, e.g., within one day. An extract that is enriched 1:50 is then obtained at the bottom. Thinner proportions are used for the next batch.

2. The operation is conducted in the flow countercurrent principle such that a cell of spent coffee powder is released, [then] newly coated with coffee powder, and this furnishes the most enriched extract for throughflow, a part of the extract corresponding to one cell is removed and water is allowed to enter in the then most strongly spent cell, etc. The concentration can be pushed so far here that the extract flowing out is approximately 1:100 and drips out and solidifies.

If desired, known additives can be added to the liquid or dried extract in a known manner, e.g., to increase the full-body quality or the like.

Finally, it was found that not only coffee but also tea can be processed in the same manner. Instead of water, ethyl alcohol, etc., can also be used as a suitable solvent. Not a dark, but a lighter-colored extract is then obtained.

A coffee immediately ready for drinking can be prepared from the liquid or solid or powdered extract obtained by pouring hot water at, e.g., 55°C over it. The extract can also be used for mixed drinks with milk, cocoa or the like. It can be used also for iced coffee, coffee royal, mocha beans, chocolate fillings and other confectionery, pastries and baked goods.

The invention process offers the great advantage of a simple, inexpensive production and enrichment process in connection with obtaining a high-quality product that is easy to prepare and contains all the desired substances.

#### Claims

1. Process for the production of a dark, bitter, fully aromatic coffee extract in liquid or solid form by treating the ground roasted coffee with water or other solvents, characterized in that the ground coffee, optionally in mixture with solid diluents such as washed sea sand or spent coffee powder, is extracted to the point of exhaustion with cold-to-lukewarm water or the like and the liquid extract is brought to dryness, sparingly if desired, e.g., by spraying in a drying tower.
2. Process according to Claim 1, characterized in that the extraction is conducted under pressure.